Purpose

Grays Harbor Long-Term Management Strategy

Background

The Grays Harbor navigation project includes a deep-draft channel and two jetties. The entrance channel ranges in width from 350 to 1,000 feet at a depth of 32 to 38 feet. The jetties extend seaward from Point Brown (north) and Point Chehalis (south), creating a 6,500-foot wide coastal inlet. Point Chehalis is protected with a Corps groin and revetment system.

The Corps of Engineers maintains the navigation channel annually, dredging 1.7 million cubic yards of material and placing the material at half a dozen designated disposal sites in the area. The shoreline to the west and south of Point Chehalis has undergone major changes since the north and south jetties were built in 1898 and 1917. The south jetty is a barrier to northerly drift, and by 1904 South Beach had advanced 3,000 feet to the west.

During much of the 20th century the shoreline advanced or retreated depending on the condition of the jetty structure. However, since the 1960s there has been a trend of erosion along the South Beach shoreline.

In December 1993 a winter storm breached the land between South Beach and the south jetty.

In 1994 the Department of the Army directed the Corps of Engineers to fill the breach to reduce a risk to the south jetty. The Corps placed 600,000 cubic yards of dredged material to fill the breach with sand from the navigation channel at a federal cost of $4 million. At that time the Corps undertook a study to evaluate on-going erosion problems and find a long-term solution to protect federal features and local improvements.

In 1997, a Corps study concluded that the most efficient and effective long-term solution would be to extend the south jetty eastward to meet a southward extension of the Point Chehalis revetment and placement of dredged material in Half Moon Bay. However, the plan raised serious environmental and recreational concerns, so the plan was deferred. A modified plan to extend the life of the breach fill was developed. The plan included building a wave diffraction mound intended to reduce erosion on the western shore of Half Moon Bay, a gravel/cobble transition beach intended to slow erosion on the beach adjacent to the south side of the jetty, and work on the landward end of the jetty structure intended to protect it from undermining and reduce wave-caused erosion on Half Moon Bay. As mitigation the Corps removed armor stone from a 250-foot-long remnant of the south jetty. The project was completed in 1999.

In November 2002, it appeared the land adjacent to the south jetty would breach. To prevent a possible threat to the federal navigation project, the Corps used 135,000 cubic yards of sand from a stockpile to restore the breach fill and placed additional gravel and cobble along the Half Moon Bay beach.

In February 2004, the Corps placed about 29,000 cubic yards of sand on the breach fill. Periodic sand placement maintains the breach fill until a long-term management strategy can be formulated and implemented.

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